

ABSTRACT OF THE INVENTION

A circuit and method for level-shifting an input signal are disclosed that provide for
level-shifting of a the input signal where an external voltage level is greater than an internal
5 voltage of the signal. In the present invention, the input signal is compared to a reference
signal to produce a differential current signal reflecting the logic level of the input signal.
The differential current signal is reflected through a pair of current mirrors operating from
the external voltage level to drive a pair of resistive loads. Each of the resistive loads is
coupled in series with a current sink between the internal supply voltage and a ground
10 voltage. As a result, the input signal may be received and level-shifted with gain even when
the internal supply voltage is less than twice a transistor threshold voltage without
introducing significant distortion to the received signal.